

Safety Data Sheet: BioDynoCMZ

According to UN GHS 9th Ed, SANS 10234:2019, Regulation EC 1272/2008 [EU-GHS/CLP]

SECTION 1. IDENTIFICATION OF MIXTURE/SUBSTANCE

1.1 PRODUCT IDENTIFIERS

Product Name: BioDynoCMZ

Product Type: Foliar Applied Plant Nutrient

Product Description: Light Brown Murky Liquid

1.2 DETAILS OF SUPPLIER OF SAFETY DATA SHEET

AgriLibrium (Pty) Ltd, Suite #120, Private Bag X1, Melkbosstrand, 7437, South Africa

1.3 RECOMMENDED AND RELEVANT USES

Identified Uses: Foliar applied nutrient.

1.4 EMERGENCY CONTACT

Emergency Number: +27 861 555 777

SECTION 2. HAZARD IDENTIFICATION

2.1 CLASSIFICATION OF MIXTURE OR SUBSTANCE

Pictogram(s): 

Signal word: Danger

Hazard Statement(s):

| | |
|------|--|
| H360 | May damage fertility or the unborn child |
| H341 | Suspected of causing genetic defects |
| H350 | May cause cancer |

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| | |
|------|---|
| H411 | Toxic to aquatic life with long-lasting effects |
| H314 | Causes severe skin burns and eye damage |
| H318 | Causes serious eye damage |
| H372 | Causes damage to organs through prolonged or repeated exposure |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled |
| H317 | May cause allergic skin reaction |

2.2 PRECAUTIONARY STATEMENTS

| | |
|----------------|---|
| P102 | Keep out of reach of children. |
| P203 | Obtain, read and follow safety instructions before use |
| P264 + P265 | Wash hands thoroughly after handling. Do not touch eyes. |
| P280 | Wear protective gloves/ eye protection |
| P318 | If exposed or concerned, get medical advice |
| P273 | Avoid release to the environment |
| P302+P361+P354 | If on skin: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes. |
| P305+P354+P338 | If in eyes: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P319 | Get medical help if you feel unwell. |
| P304+P340 | If inhaled: Remove person to fresh air and keep comfortable for breathing |

2.3 OTHER HAZARDS

None

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SECTION 3. COMPOSITION & INGREDIENTS

3.1 PRODUCT DESCRIPTION AND SUBSTANCES

| | |
|-----------------------|---------------------|
| Chemical Name: | Manganese Sulphate |
| CAS No. | 10034-96-5 |
| Formulation | 10 - 20% |
| Chemical Name: | Zinc Chloride |
| CAS No. | 7646-85-7 |
| Formulation | 5 - 10% |
| Chemical Name: | Copper Sulphate |
| CAS No. | 7758-99-8 |
| Formulation | 5 - 10% |
| Chemical Name: | Disodium Octaborate |
| CAS No. | 12280-03-4 |
| Formulation | <3% |
| Chemical Name: | Cobalt Sulphate |
| CAS No. | 10026-24-1 |
| Formulation | <3% |
| Chemical Name: | Nickel Sulphate |
| CAS No. | 10101-97-0 |
| Formulation | <3% |

SECTION 4. FIRST-AID MEASURES

In the case of seeking medical attention, provide this safety data sheet to the physician in attendance.

4.1 DESCRIPTION OF NECESSARY FIRST-AID MEASURES

Following Ingestion: If product has been ingested seek medical help, DO NOT induce vomiting unless instructed to so by a medical physician. Drink water and rinse mouth with water.

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Following Skin Contact: If skin irritation occurs, wash affected areas of skin with plenty of water for at least 15 minutes. Seek medical help if skin irritation persists.

Following Eye Contact: Cautiously wash eyes with plenty of water for at least 15 minutes. If eye irritation continues to occur seek medical attention.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 SUITABLE EXTINGUISHING MEDIA

Dry powder or Carbon Dioxide

5.2 SPECIFIC HAZARDS

Combustion products may cause irritation.

5.3 SPECIAL PROTECTIVE ACTIONS

Not applicable

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS

Protective Equipment: Ensure that protective nitrile gloves, safety goggles and safety boots are used for personal protection when cleaning spillages. Isolate area of spillage.

6.2 ENVIRONMENTAL PRECAUTIONS

Avoid release into aquatic environments.

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SECTION 7. HANDLING & STORAGE

7.1 SAFE HANDLING PRECAUTIONS

Use product in agreement with regards to good industrial hygiene and safety. Do not eat, drink or smoke whilst handling or using the product. When handling product, wear suitable PPE (Personal Protective Equipment) such as nitrile gloves, safety goggles and safety shoes. Avoid ingestion of product as well as eye and skin contact as far as possible. Keep away from strong oxidising agents.

7.2 CONDITIONS FOR SAFE STORAGE

Keep out of reach of children and animals. Store in a cool, dry, well-ventilated are. Do not store together with strong oxidising agents or highly alkaline products.

SECTION 8. EXPOSURE CONTROLS

Occupational Exposure Limits: None

Biological Exposure Limits: None

8.1 APPROPRIATE ENGINEERING CONTROLS

Store in demarcated area and ensure that the product does not come into direct contact with other hazardous chemicals i.e., highly alkaline products. Ensure that caps of drums are tightly closed to avoid any spillages.

8.2 INDIVIDUAL PERSONAL PROTECTIVE EQUIPMENT (PPE)

Depending on application or handling of product, personal protective equipment (PPE) should be worn and used. Safety goggles should be worn when handling or decanting product to avoid splashing into eyes. Long overall clothing should be worn when handling product to avoid contact with skin. Impermeable gloves can be worn when handling product. Safety shoes should be worn when handling pallets or drums of product.

SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

9.1 BASIC INFORMATION ON PHYSICAL AND CHEMICAL PROPERTIES

a) Appearance: Light Brown Murky Liquid

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According to UN GHS 9th Ed, SANS 10234:2019, Regulation EC 1272/2008 [EU-GHS/CLP]

- b) **Odour:** Odourless
- c) **pH:** 3,1 ± 0.1 @ 25°C
- d) **Melting point/range (°C):** No information available
- e) **Boiling point/range (°C):** No information available
- f) **Flash point (°C):** Not applicable.
- g) **Evaporation rate:** No information available.
- h) **Flammability:** N/A
- i) **Ignition temperature (°C):** No information available.
- j) **Upper/lower flammability/explosive limits:** No information available.
- k) **Vapour pressure (25°C):** No information available.
- l) **Vapour density:** No information available.
- m) **Specific Gravity:** 1.28 ± 0.02
- n) **Water Solubility:** Water Dispersible
- o) **Viscosity:** No information available.
- p) **n-Octanol/Water partition coefficient:** No information available.
- q) **Auto-ignition temperature:** No information available.
- r) **Decomposition temperature:** No information available.
- s) **Explosive Properties:** No information available.
- t) **Oxidizing Properties:** No information available.

9.2 OTHER INFORMATION

No other Data Available

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SECTION 10. STABILITY & REACTIVITY

10.1 REACTIVITY & CHEMICAL STABILITY

The product is stable and not reactive under correct and recommended storage conditions.

10.2 CONDITIONS TO AVOID

Contact with any incompatible materials.

10.3 INCOMPATIBLE MATERIALS

Highly Alkaline products

10.4 HAZARDOUS DECOMPOSITION PRODUCTS

None

SECTION 11. TOXICOLOGICAL INFORMATION

| Components | Concentration (%) | Dermal | Oral | Inhalation |
|---------------------|-------------------|---------|---------|------------|
| Manganese Sulphate | 10 - 20 | No data | No data | No data |
| Zinc Chloride | 5 - 10 | No data | No data | No data |
| Copper Sulphate | 5 - 10 | No data | No data | No data |
| Disodium Octaborate | <3 | No data | No data | No data |
| Cobalt Sulphate | <3 | No data | No data | No data |
| Nickel Sulphate | <3 | No data | No data | No data |

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

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According to UN GHS 9th Ed, SANS 10234:2019, Regulation EC 1272/2008 [EU-GHS/CLP]

Acute Oral Toxicity: Not classified.

Acute Dermal Toxicity: Not classified.

Acute Inhalation Toxicity: Not classified.

Chronic toxicity: Not classified.

Skin corrosion/irritation: Category 1B

Eye corrosion/irritation: Category 1

Respiratory or skin sensitization: Category 1

Germ cell mutagenicity: Category 2

Carcinogenicity: Category 1A

Reproductive toxicity: Category 1B

STOT-single exposure: Not classified.

STOT-repeated exposure: Category 1

Aspiration hazard: Not classified.

11.2 ADDITIONAL INFORMATION

No additional information available

SECTION 12. ECOLOGICAL INFORMATION

12.1 TOXICITY

No information available

12.2 PERSISTENCE AND DEGRADABILITY

No information available

12.3 BIOACCUMULATIVE POTENTIAL

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No information available

12.4 MOBILITY IN SOIL

No information available

12.5 RESULTS OF PBT & VPVB ASSESSMENT

No information available

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

First consider re-using or recycling of product before regarding as waste material. Disposal of product should be conducted to municipal, provincial and national law and regulations. National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008, R.634). When spillage of product occurs, dilute with large amounts of water and wash away.

SECTION 14. TRANSPORT INFORMATION

Transport
Pictogram(s):



| | Land transport (ADR/RID) | Sea transport (IMDG) | Air transport (ICAO/IATA) |
|----------------------------|--------------------------|----------------------|---------------------------|
| UN No. | 2331 | 2331 | 2331 |
| UN Proper shipping name | Not regulated | Not regulated | Not regulated |
| Transport hazard class(es) | 8 | 8 | 8 |
| Packaging group | III | III | III |
| Marine pollutant | Yes | Yes | Yes |

SECTION 15. REGULATORY INFORMATION

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Occupational Health and Safety Act, 1993. Environmental Conservation Act 73 of 1989. National Water Act 36 of 1998. General Safety Regulations 1986. Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Rev 9, 2021. Regulation EC 1272/2008 [EU-GHS/CLP] and EU directives 67/548/EEC or EC 1999/45/EC

SECTION 16. OTHER INFORMATION

16.1 LEGISLATION RELATED TO SAFETY DATA SHEET

This safety data sheet has been designed in according to the standards of the International Organization for Standardization.

16.2 DISCLAIMER

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Validated by: Dr C. Malan & H. Korff on 28/05/2022

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